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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,976	04/20/2005	Funda Sahin Nomaler	NL 021062	5805

24737 7590 05/03/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

PRESTON, ERIK D

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/531,976

**Applicant(s)**

SAHIN NOMALER, FUNDA

**Examiner**

Erik D. Preston

**Art Unit**

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

Claim 8 is objected to because of the following informalities: In the last line of the claim, the phrase "...said top portion..." lacks proper antecedent basis and, for examination purposes, will be interpreted as saying "...a top portion..." Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 7 & 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izawa et al. (US 6075297 previously cited) in view of Jack et al. (IEEE Transactions on Industry Applications, Vol. 36, No. 4, July/August 2000, Pages 1077-1084; supplied by Applicant) in view of Korenaga (US 2003/0102723).

With respect to claims 1 & 7, Izawa teaches a linear electric motor comprising a movable part consisting of a magnetic core (Fig. 6B, #24) which supports a set of electrically conductive turns (Fig. 6B, #2), said movable part is slideably supported by a rail which is provided with at least one set of permanent magnets (Fig. 6B, #12A-C), distributed in a longitudinal direction along the core's periphery, which magnets produce magnetic fields that cooperate with the set of turns via an air-gap, characterized in that said electrically conductive turns are wound around the periphery of the core

substantially perpendicular to the central line thereof, and wherein at least two sets of permanent magnets are arranged along said periphery in a longitudinal direction such that the at least two sets of magnets are arranged at different angles to said core (as seen in Fig. 6B), but it does not specifically teach said magnetic core being made of soft-magnetic composite material, or having a substantially triangular cross section. However, Jack teaches magnetic cores for motors being formed of soft-magnetic composite material (Col. 2, Paragraphs 1-5), and Korenaga teaches a linear motor with substantially triangularly shaped elements (Fig. 22A, #404 & 405). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the core of Izawa in view of the soft-magnetic composite material as taught by Jack because it provides far superior performance to a conventionally laminated motor (Jack, Col. 2, Paragraphs 1-5), and to form the core of Izawa with a triangular cross section because a triangular linear motor has a higher rigidity than a square one (Korenaga, Paragraph 86). It also would have been obvious to one of ordinary skill in the art at the time of the invention to form the movable element of Izawa with a triangular cross section since it has been held that a change in shape is not considered to be patentably distinct (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)).

With respect to claim 8, Izawa in view of Jack in view of Korenaga teaches the motor of claim 7, but it does not teach one apex of said substantially triangular form being eliminated. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to eliminate one apex of the triangular movable part (such as is taught by Lovett et al. (US 5277744) Fig. 3, #30) since it has been held that a change

in shape is not considered to be patentably distinct if it does not effect the utility of a device (*In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966)). It is not clear how removing one apex of the substantially triangular core would effect the utility of the device.

Claims 4,5,10 & 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izawa et al. (US 6075297 previously cited) in view of Jack et al. (IEEE Transactions on Industry Applications, Vol. 36, No. 4, July/August 2000, Pages 1077-1084. Supplied by Applicant) in view of Korenaga (US 2003/0102723) further in view of Hwang et al. (US 6528907 previously cited). Izawa in view of Jack teaches the motor of claims 1 & 7, but it does not teach that said rail is provided with a cooling means, which extends in the longitudinal direction of the rail, and in heat-exchanging contact with said core and turns over part of their surface, or that said core is provided with internal cooling channels. However, Hwang teaches a linear motor with coils that are provided with a cooling means (as seen in Fig. 8), which extends in the longitudinal direction, and in heat-exchanging contact with a core and turns over part of their surface wherein said core is provided with internal cooling channels (Fig. 8, #7). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the core of Izawa in view of the cooling means as taught by Hwang because it provides an improved cooling effect (Hwang, Abstract).

Claims 6 & 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Izawa et al. (US 6075297 previously cited) in view of Jack et al. (IEEE Transactions on Industry Applications, Vol. 36, No. 4, July/August 2000, Pages 1077-1084; supplied by

Applicant) in view of Korenaga (US 2003/0102723) further in view of Okamoto (US 4545117). Izawa in view of Jack in view of Korenaga teaches the motor of claims 1 & 7, and Izawa teaches that said core is provided with circumferential slots (as seen in 6A & B, there are slots between groups of windings) in which said turns can be located, said slots having a body portion in communication with said core, and an end portion in communication with said body portion, but it does not teach a top portion being wider than said body portion. However, Okamoto teaches a linear motor (Fig. 3, #16) having slots with body portions (Fig. 3, #22) and top portions that are wider than said body portions (as seen in Fig. 3). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the body portions of Izawa in view of the body portions as taught by Okamoto because they would provide a means for implementing the motor of Izawa as a stepper motor (Okamoto, Col. 2, Lines 14-22).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 & 4-11 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

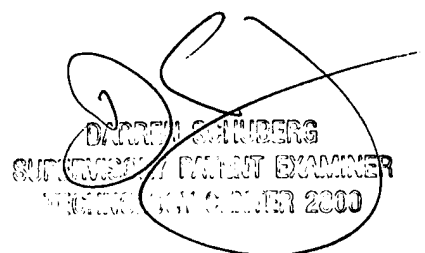
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik D. Preston whose telephone number is (571)272-8393. The examiner can normally be reached on Monday through Friday 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on (571)272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



04/28/2006



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APR 28 2006